NIGHT BOMBING WITH THE "BEDOUINS"

By

LIEUT. ROBERT H. REECE

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NIGHT BOMBING WITH THE BEDOUINS

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By One of the Squadron

ROBERT H. REECE
LIEUT. D.F.C., R.A.F.

With Illustrations

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DEDICATION

In a spirit of the deepest reverence I dedicate this unworthy effort to the memory of a true sportsman, a loyal friend, and a gallant officer who was killed in action while serving his Country as a Pilot in the American Air Service,

LIEUTENANT SAMUEL PIERCE MANDELL

America has given of the finest of her Youth to uphold the Cause of Right, but she has given no one of more splendid promise than he, whose service was an example of devotion to duty, of readiness for action, and of undaunted courage.

His life was an inspiration to the living "to carry on" and finish the great struggle for which he died, that he and those like him may not have died in vain.

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NIGHT BOMBING WITH THE "BEDOUINS"

CHAPTER I

PER ARDUA AD ASTRA

IN prehistoric times the first man to make for himself a stone hatchet probably became the greatest warrior of his particular region. He may not have been as strong physically as his neighbor, but with the aid of so marvellous an invention as a stone hatchet he undoubtedly conquered his enemies and became a great prehistoric potentate, until some other great man made a larger and stronger hatchet; so down to the present invention has followed invention and improvement has been added to improvement to such an extent that it is difficult to imagine what new weapon of

destruction man can develop in the future.

What would the past generation have said of a man who had prophesied great armies fighting in the air? Even in the early months of the war there were but few who realized what an important part of the war was to be carried on in the newly conquered element. When the infantry saw an occasional box-kite-looking machine drifting slowly over the lines, struggling to keep itself aloft, how many, I wonder, foresaw that in a few months these machines would be swooping down on them like swallows, raking them with machine guns by day and bombing them by night? How many artillery officers laughed at the suggestion that a day was coming when thousands of great guns would be directed from the air? Yet in a few short months two great blind fighting giants, their arms stretching from the Belgian coast

to the Swiss border, learned to see each other; and their eyes were in the air.

The first aeroplanes to cross the lines carried no armament; they were for reconnaissance work only; they would fly a few miles back of the enemy lines, have a good look around, and then come back and report what they had seen. Often British and German machines would pass quite close to each other. Flying was considered sufficiently dangerous, not to add a further danger to it by attacking enemy machines.

The Germans, however, because they greatly outnumbered the British in the air, had more eyes to see with; something had to be done; so rifles were carried by the British and a finer sport than shooting ducks came into vogue. This quickly led to the carrying of machine guns. Ingenuity in devising sights to compensate for the speed of our own machines and to gauge a proper deflection according to

the speed and angle of approach of the enemy machine, soon decreased the advantage the enemy aviators had through superior numbers.

For example, if our machine was flying at the rate of one hundred miles per hour and the enemy's machine was travelling past us in the opposite direction at an equal rate, our fore-sight nullified our motion and enabled us to shoot as if from a stationary base, while our back-sight helped us to gauge that imaginary point at which to shoot where our bullets and the enemy machine would meet. In other words, we shot at an enemy machine although we ourselves were travelling rapidly, exactly as a sportsman shoots at a bird on the wing.

Then a new aeroplane was developed, the single-seater tractor, with a Vickers gun, synchronized to shoot through the rapidly revolving propeller so as to avoid the blades. These machines were used to

patrol the lines and keep enemy machines from crossing, or to accompany a reconnaissance machine as protector; for they were very much faster, easier to manœuvre, and altogether very much more efficient fighters. At first they operated singly, but it was soon discovered that two of these scout machines operating together invariably obtained better success than when operating alone. This led to formation flying, and up to the cessation of hostilities these formations grew in size and varied in shape.

The reconnaissance work was soon divided into classes: long and short reconnaissance and photographic reconnaissance. The long reconnaissance dealt with enemy movements far behind the lines; the short reconnaissance with enemy activities near the front. The photographic reconnaissance consisted of taking aerial photographs of everything of military importance within flying

radius. These photographs pieced together showed the enemy defences along the entire British front and their changes from day to day.

Wireless apparatus was soon attached to aeroplanes, and this enabled an aviator to communicate with people on the ground many miles away; and so what was called artillery observation was developed. Roughly speaking, this is the direction of the fire of our batteries against enemy targets; but, just as specialization came in reconnaissance and fighting, so now machines specialized in artillery observation. To-day the efficiency of the artillery depends largely upon its direction from the air. For instance, when a battery takes over a new area the gunners may be called upon to fire at certain targets, such as cross-roads or houses used as infantry headquarters or ammunition and stores dumps, at a moment's notice. Consequently, if these

targets are registered by aeroplane, all the gunners have to do when called upon to open fire is to refer to their registration book which will give them the necessary angles to use on their sights, then, by allowing for the temperature of the day and the direction and velocity of the wind, their shooting is certain to be far more accurate than it would be if the target had not been previously registered. The registration of targets to-day without the use of areoplanes is very often impossible.

The registration of targets from the air, however, is not the most important part of this work. For instance, a machine will be flying over enemy territory; the observer will see the flash of an enemy gun and will pin-point its position on his map, which is marked off into large and small lettered and numbered squares. This operation enables him to send by wireless what is known as a zone

call, giving the exact location of the enemy battery to all of our batteries within range. The enemy battery then has to move suddenly, if it is ever to move at all.

Barrages can also be controlled very efficiently from the air, so, considering the comparatively short time that aeroplanes have been used in this work and the wonderful results that have been obtained, it does not take much imagination to see the necessity for all future artillery officers to be trained as aviators.

In the earlier stages of the war it was very difficult for Headquarters to keep in close touch with the infantry during a "push"; consequently, considerable loss of life might result from one portion of the line advancing out of contact with another. Probably the eagerness of raw troops to keep on advancing regardless of their objective has led to a considerable and unnecessary loss of life. The aero-

plane can be used in these situations to great advantage, and after the development of what is known as "contact patrol" the aeroplane became the connecting link between Headquarters and the infantry.

It was not until 1916 that the full powers of the aeroplane as an offensive weapon began to be realized. Bombing was done, but it was of a desultory nature, and although the number of machines engaged in this work steadily increased, and the work itself became more and more diversified and specialized, it was not until 1918 that the possibilities of the aeroplane as a purely offensive weapon were appreciated.

An aeroplane can operate far back of the enemy lines, both in the day and at night; enemy troops in transport can be bombed; railway stations, sidings, etc., damaged; transports of all kinds delayed; and ammunition dumps, when

located, can be blown up. In fact, military targets of all sorts can be attacked from the air that cannot be reached in any other way. The very foundation of a nation's strength in war, its industry, can be attacked from the air and, if attacked on a large enough scale, can be destroyed. For instance, eighty per cent of the German steel industry was within bombing range of the Allies. The Westphalian group of high-grade steel industries centred at Essen is about two hundred miles from Nancy. If this group had been bombed on a large scale the source of supply of German guns and munitions could have been destroyed; for a blast furnace destroyed cannot be replaced within nine months, and the destruction of the central electrical plant of a steel factory would place the entire factory out of operation for at least six months. The hundreds of bombing machines which the English aeroplane fac-

tories were turning out at the time hostilities ceased, and the thousands of men being trained for bombing, make one wonder what would have happened to the German industries if the war had continued through the spring of 1919.

Besides these hundreds of aeroplanes under construction and the thousands of men in training, the Royal Air Force had in operation, November 11, 1918, over twenty thousand aeroplanes, over thirty thousand aviators, and over two hundred thousand mechanics and other personnel.

CHAPTER II

THE "BEDOUIN" SQUADRON

THE "Bedouin" Squadron, so called because as a unit it was constantly moved from place to place, and because its members as individuals were wanderers at heart, was formed in September, 1917, equipped with the large Handley-Page bombing planes, and sent to the Nancy front to carry out pioneer work in long-distance bombing. The "Bedouins," as the officers of this squadron were called, first saw the light of day in England, Scotland, Ireland, America, India, Canada, South Africa, and Australia. Before becoming aviators many of them had fought in the infantry on the western front, in Gallipoli, and in Egypt; some as officers, some as privates, but for no general reason, unless the law of

nature which prevents squirrels from remaining on the ground also applies to men, they one by one in divers ways drifted into the Flying Corps, and flew different types of machines on different fronts until brought together and formed, "willy-nilly," into the Bedouin Squadron.

I

There was "Jimmie," whose insides had been shot away in Gallipoli. He was the envy of the officers' mess, because his newly acquired digestive apparatus, composed principally of silver tubes, could assimilate more wine without producing ill results than any other five members of the mess. Jimmie was not a flying officer; by all the laws of nature he should have been a corpse, but he had a heart which disregarded an intestine designed by a surgeon who must have been a plumber in some previous incarnation, and this great heart carried him

through four years of war, and made of him an energizing force to all who came in contact with him. It was not until after the cessation of hostilities that the soul of this hero was liberated from the poor maimed body with its mechanical digestive system.

Jimmie was the First Lieutenant of the Station; it was his job to see to the discipline of the two hundred and fifty mechanics, riggers, carpenters, armorers, drivers, and officers' stewards. He did this in such a way as to make all the men love him except the few, very few, who were surly slackers, and these feared him worse than death itself. Jimmie was always just, but he demanded results. To those who shirked he was a just judge and an unsympathetic jury; so, under Jimmie, slackers soon became demons for work, and later on learned like the others to love him. To those who produced results, he was a father.

JIMMIE WALKS UP AND DOWN THE TRENCH

I remember that shortly after the squadron took up its residence on the Nancy front, the Huns came over and bombed us severely; many of the mechanics were fresh from the factories in England and were quite unaccustomed to seeing the damage that one hundred pounds of high explosive can do to the delicate anatomy of the human being; panic seized them; but a greater fear possessed them when Jimmie's orders burst upon them like the rat-tat-tat of a machine gun; they marched as if on parade into the trenches, recently dug behind the hangars; then Jimmie, smoking an occasional cigarette, strolled up and down in front during the three hours' bombardment.

So the men soon learned, under Jimmie, the value of discipline; it meant their safety when under fire, and it meant freedom from military punishments. They were quick to grasp the fact

that any negligence on their part might mean death to the aviator who flew in the neglected aeroplane. Flagrant neglect they soon learned might cause other deaths than those suffered by the unfortunate aviators.

II

There was Sammie, a prototype of the caricatured Englishman in our comic papers. Every American theatre-goer has seen Sammie exaggerated on the music-hall stage.

Sammie was a small boy with an eyebrow on his upper lip and an apparently permanent window over his right eye. Before joining the Flying Corps he had served seventeen months in the trenches as a private; finally, driven mad with filth, rats, and other vermin, he captured an enemy machine-gun emplacement single-handed, and was given a commission. Shortly afterwards he joined the

Flying Corps, probably because he could not keep his new uniform clean while in the trenches.

Sammie was always immaculate, and as a uniform gives one very little opportunity to express one's individuality in dress, Sammie carried his handkerchief up his sleeve. Even Generals envied Sammie's field boots and every one who met him wanted to know the name of his tailor.

In peace-time Sammie would have looked like a toy Pom with a ribbon around its neck; but a more imperturbable man in the face of danger never lived.

"My word" was the expression used by Sammie to denote every degree of human emotion. If it was Sammie's lot to draw the occasional egg served in the Bedouin mess, his only remark when it hopped out of reach would be, "My word."

I remember one night when both of our machines were out of action, Sammie and I, who slept in the same hut, went to bed at the early hour of twelve o'clock; at about one in the morning the Huns dropped their first bomb very close to us; a picture of Sammie's mother was on a stand beside the head of his cot; a fragment of the bomb came through the wall of the hut and shattered this picture; I landed, as far as I know involuntarily, in the middle of the floor with a lighted torch in my hand; Sammie saw the shattered remains of his mother's picture; "My word, mother will be pleased," he said, turned over and was sound asleep instantly. I know Sammie slept because he never remarked on my taking a short cut to the trenches through the window.

Another time when a Hun bomb dropped in the officers' trench and failed to explode, Sammie, who was but two feet away, tried to lift it, failed, and then

lay full length upon it, believing it to be of the "delay action" variety; when our Major, a bomb expert, appeared on the scene a few moments later and laughingly declared the bomb a "dud," Sammie's embarrassment expressed itself in "My word." If the detonating apparatus of this bomb had been all that the Huns intended it to be, Sammie would have returned to minute specks of dust and his name would have been added to the long list of dead heroes; but since the bomb was a "dud," Sammie was made the butt of his friends' wit.

Sammie was always philosophical. He was once ordered to take a new machine on a very long raid. We had all examined this new aeroplane and declared it a "dud"; so we cheered Sammie up as well as we could by drinking his health and inquiring into his taste in flowers. Undismayed, Sammie took the machine off the ground, with the wheel held into his

stomach; the rigging of the machine was such that it would fly on an even plane longitudinally if the wheel was kept back as far as possible. By all the laws of aeronautics this aeroplane should have crashed before leaving the ground, but it did not. Sammie climbed it to five hundred feet in an hour and a half. As Sammie now had seven and one half hours petrol left and was still four hours away from his objective, it would have been quite justifiable for him to return without going any farther; in fact, it was the only reasonable thing for him to do; but Sammie always trusted to luck rather than reason, and his luck did not fail him. One engine "conked" and he was forced to turn back. He fired his forced landing signal when approaching the aerodrome, but the aerodrome was being bombed by the Huns in a very thorough manner and Sammie had to land in complete darkness, the inevitable result be-

ing a crash. Sammie extricated himself from the wreckage, found that both of his companions were dead, rescued one of the machine guns from its damaged mounting, together with several drums of ammunition and practised his marksmanship on the enemy planes until an enemy bomb ruined his clothes and left him, after a few months in the hospital, minus an arm.

III

There was "Jock," a "wee bonnie laddie," from the south of Scotland. He stood five feet three inches tall when wearing field boots with exceptionally high heels, but that did not prevent him from braining a Hun with the Hun's own wrench some sixty miles back of the enemy's front lines, and this is how it happened.

One morning, about three o'clock, information arrived, together with a com-

plete and undamaged Hun aeroplane and two friendly Hun aviators, that at a certain German switch station a troop train and an ammunition train were due to pass at a certain hour. Jock and his pal left the congenial beer barrel, turned the friendly Hun aviators over to the guard, made themselves acquainted with the Hun aeroplane, refilled it with petrol and oil, and departed on a merry adventure. Forgetting that the Hun machine would be subject to attack by our own aviators, Jock and his companion were in a great dilemma when so attacked. Of course, they could not protect themselves by a counter-fire, but when a man is born in Scotland, and is a direct descendant of oatmeal-eating bandits, he naturally has a keener brain than even the Jews can boast of; consequently, by spinning nose dives and other signs of lack of control the wily Scot gleefully gained the enemy's side of the lines. Here he was un-

molested, although Hun aviators must have been astonished to see one of their own machines engaged in the British sport of "hedge-hopping"; i.e., flying close to the ground and "zooming" up over trees, houses, etc.

In due time Jock and his companion landed in a small field a few hundred yards away from the all-important switch station. Here they descended and under pretence of examining their engine, although the first one of the ever-curious crowd was still several fields away, they looked up the word "wrench" in an English-German pocket dictionary; they then marched off to the switch station. Fortunately there was but one occupant, for neither Jock nor his companion could talk German, and the idiocy of not carrying a more serviceable weapon than a pocket dictionary never occurred to the mad Scot until his companion began to make weird gurgling sounds, evidently

intended for the language of the Hun, addressed to the astonished station-master.

Then down through generations of oatmeal-eating bandits came a glimmer of sense to Jock. He grabbed the first thing within reach, a wrench, and brained the Hun station-master with a blow; then the mad but somewhat sobered adventurers found and pulled the switch lever so as to bring the approaching trains into collision, and departed. When Jock saw the crowd which had collected about his aeroplane, he took a solemn oath never to touch beer but to stick to whiskey; but the crowd, which included a few Hun soldiers, respectfully made way for the "camouflaged" British aviators and a few moments later, wet with cold perspiration, they were in the air. Thoroughly sobered, they made for home with their engine "full out." Six weeks later "intelligence" reported that

a German troop train and ammunition train had collided.

IV

There was "Mac," a North of England man. Before the war he was a typical English sportsman; he lived for hunting, and polo was his hobby. Like the rest of his class he pushed his way into the fighting line as soon as possible, as a private in the First Hundred Thousand. But eventually his genius expressed itself and leaving the known walks of man he became a master of the newly conquered element. Mac's mind was not limited by science, his soul was not dwarfed by religious prejudice, he held no political position, and he had no personal military ambition. He fought to defeat a threat to the civilization he believed in, to preserve a form of government that his ancestors had bled and died for, and to secure a future for his tiny son free from the hell

of war. Mac, like every other man who had the courage to fight, and if necessary, die for his beliefs, hoped that the fighting man would be allowed to fight on until these ends had been achieved so that those who had died should not have made the great sacrifice in vain. He hoped, like all other fighting men, that politicians would not be given the power to render valueless to posterity the sacrifice of hundreds of thousands of lives; but Mac was merely a man, of fearless integrity, honesty of purpose, with humanitarian ideals, and a believer in Democracy; he could not realize that a large majority, because of selfishness, ignorance, and a lack of the spirit of self-sacrifice, do not deserve the right to vote. But Mac was a sportsman and a gentleman, the descendant of generations of men who faced death willingly in a cause they knew was honorable and who died happily in the thought that their death made

life easier for future generations. So Mac did not worry about the selfish ambitions of men; he did all he could to win the World War.

I first met Mac a few months after he flew a Handley-Page machine from London to Constantinople and back to Salonica, a distance of over two thousand miles. Mac was a Captain then, he is a Captain now, but no living man has done more damage to the Hun than Mac has done. A far greater leader of men than his great uncle, who was a General in our Civil War, Mac gave a soul to the Bedouin Squadron. To Mac's leadership is due the first bombings of Mannheim, Coblenz, Thionville, Frankfort, and Cologne.

It was Mac who flew a German aeroplane to Sedan, followed a "spotted" train to a near-by station, swooped down as the German High Command left the train and opened on them with his ma-

chine gun. It was Mac who landed over ten times near Karlsruhe at night and returned with invaluable information. But it is not because of the innumerable suicidal adventures of which Mac is the hero that every Bedouin, no matter in what part of the world he may be, always drinks a silent toast to Mac whenever possible; it is because every Bedouin realizes that a great man carried out a small man's job in a great way.

V

"Gus" was the president of the Bedouin mess, and probably because of an early education at Heidelberg, he believed in starving the British aviator. At all events, while Gus was mess president we all starved with agonizing slowness, for Gus had but two ideas of what constituted a menu. Our meals consisted solely of "bully beef" and Brussels sprouts; this meal was varied occasion-

ally by leaving out the sprouts. To every indignant complaint from long-suffering members of the officers' mess, Gus would answer with the incontrovertible statement that "humming-birds' tongues cannot be purchased with tuppence"; this incontrovertible statement always reduced the complaining member to frothings at the mouth and other signs of inexpressible rage. Nevertheless, under the starvation system of Gus's stewardship a large credit balance was established at the Société Générale, which enabled the succeeding mess president to replace the expert electrician, who by army wisdom had been converted into a poisonous cook, with a Frenchman, whose cooking was not cooking at all, but an art which filled the Bedouins with admiration and destroyed their waist lines. Six-course banquets, ending with a rare old yellow Chartreuse, became the order of the day, and whenever some

seductive delicacy defied analysis we would ask Gus if it contained the tongue of the humming-bird.

But Gus, although a failure in always satisfying the epicurean tastes of the Bedouins, won fame by being the first to bomb Cologne.

VI

"Mid" was a Yank who joined the squadron a few months before its "bust-up." Mid had been a private in the first American contingent to arrive in France; but because he was born in Cleveland, Ohio, and knew that automobiles were manufactured in Detroit, Michigan, he was given a commission. The Bedouins first met Mid in January, 1918. He had run his car — Mid was always driving a car — into a snowdrift, and wandered a couple of miles through a blizzard in search of help. Fortunately for us, he tumbled into our mess in the midst of

a "storm celebration"; i.e., a celebration in honor of a storm which forces birds and all other inhabitants of the air to seek shelter. Mid was pounced upon, placed in front of the fire, and given hot rum. A crew of men were sent off to dig his "benzine buggy" out of the snow and convey it to Mid's station, it having been decided that Mid should spend the night with the Bedouins.

Mid soon won the hearts of the Bedouins by showing a proper appreciation for hot rum, and when he prefaced his first remark to the C.O. with "Say, kid," the Bedouins realized that Mid gave every promise of making this "storm celebration" unique in Bedouin history, and as far as Mid was concerned it certainly was.

Mid entered into the spirit of the occasion with Western thoroughness and learned a lesson in a few hours which it has taken some men years to learn —

that hot rum when taken on a cold and empty stomach must be treated with respect; in fact, a certain amount of coyness is not out of place. Mid was soon being supported on a chair while he delivered an epic on the "soul of a jellyfish"; he was then tossed in the "sacred blanket" and put through other Bedouin initiations; after which he was tucked comfortably in Jock's bed, while Jock, bound hand and foot and rolled in blankets, made horrid Highland remarks from the draughty floor of the hut.

Dear old Mid, however, bore no ill-will to the Bedouins for what he might have considered unceremonious treatment of an American officer who was an honored guest. The next morning with a humble but dignified mien, Mid apologized for everything that he had done. As a matter of fact, the only disreputable thing Mid had done while under the influence of an excess of hot rum on an

empty stomach was to make friends with a few men whom the Huns had sworn to kill on sight.

Nothing daunted, Mid soon "wangled" permission to become attached to the Bedouin Squadron, and a more daredevil spirit and lovable comrade than Mid did not exist among the Bedouins. He was always as keen for work as he was "full out" for a party, and he was always the life of a celebration. I remember one night when the C.O. read out at dinner a telegram which concisely stated that His Majesty the King had awarded to one of the Bedouins a very great honor, Mid broke loose. "Say, kids," he said, "I want to say right here that it's a great honor for my mother's younger son to be a Bedouin, and since it's a 'dud' night I want to ask your permission, Sir" (turning to the C.O.), "to present every Bedouin with a quart of the best." Permission being

given by the C.O. on the condition that the C.O. himself would be allowed to share in the "largess," every Bedouin had placed before him a quart of Heidsieck Monopole. Songs and speeches followed, and Mid, since he could not "take the air," took the floor.

"Fellow citizens," he said, balancing himself on an upturned beer barrel, "it gives me great pleasure to be able to stand before you this evening"; support given and applause. "It has always seemed to me that the greatest country in the world might be considered a bit slow in entering the war." [Hear! Hear!] "But, gentlemen, now that we are in, I want to say that we will be the first out." [Loud applause!] "I want you to understand that because the United States has always been considered the historic enemy of Great Britain, Germany was enabled to persuade an ignorant electorate that the United States

and Germany were friends. But now we are in, we are in to the finish. When I say finish, gentlemen, I mean a finish to the fighting, but I beg of you to be careful of the non-fighting part of my country's population, and their representatives. More I cannot say, except this, if ever your King or your sea-power is threatened, you may depend upon every true American; we owe you a debt, and depend upon it every descendant of the founders of our country will die before that obligation is allowed to be repudiated." With loud cheers, Mid was lifted from his perch.

VII

The Bedouin who held the unenvied record for crashes was known throughout the service as "Killem." Almost every time he went on a raid he crashed his machine, fortunately for him on this side of the lines. One night, returning from a raid on the Boche magneto works at

Stuttgart, he lost his way and was forced to land, because of engine trouble, in France, near the Swiss border. The topography of the country here being mountainous, he was fortunate in merely "writing off" his aeroplane. He might easily have killed himself and his two companions, but he came out of the crash quite unhurt except for a severe chill contracted by a forced sojourn in the icy waters of a shallow pond. Pinned beneath the wreckage of his machine with an unpleasant ripple of water in close proximity to his chin, Killem had an excellent opportunity to think over his past sins while his companions in misery, who had been thrown clear for no other reason apparently except that the devil takes care of his own, struggled manfully, one with a broken arm and the other with a wrenched knee, to release him from the pressure of wreckage which held him helpless.

A few nights after this unpleasant experience the mad fellow "took off" down wind. This idiotic method of leaving the ground resulted in his being barely able to rise above the roofs of the near-by village and brought him into direct contact with the church spire. The spire being of solid construction withstood the impact; the aeroplane did not. So Killem and his companions, together with the wrecked Handley-Page and one thousand five hundred and sixty-eight pounds of undetonated bombs descended onto the street below — UNDETONATED. It was exceedingly fortunate for the inhabitants of the French village that the bombs remained undetonated. Killem crawled out of the wreck, looked ruefully at the church spire, and muttered, "I've always felt that I should have gone oftener to church in my youth. Now look at the damned result of my negligence."

It was Killem who tested out a new

aeroplane one day while a south wind equal to the air speed of his machine was blowing. While flying north he travelled over the ground twice as fast as he travelled through the air, but when he turned around over the city of Toul he remained stationary. He was travelling through the air as fast as before, but now he was headed south, and as the wind passed over the ground toward the north as rapidly as Killem travelled through the air toward the south, the inhabitants of Toul were amazed to see a heavier-than-air machine remaining stationary above their heads. This situation greatly alarmed a dear old lady of Toul, who eventually arrived at our aerodrome in a donkey cart with the astounding information that one of our planes "had run out" of petrol and was stalled directly above her house.

CHAPTER III

THE BEDOUINS AT OCHEY AERODROME

IF you had visited the Bedouin Squadron at about eleven o'clock in the morning you would have received quite a shock when entering the officers' mess. In the first place, you would have found the mess deserted except for several dogs of unknown species and innumerable cats, — some proudly nourishing recent offspring, others in various stages of anticipation of a similar pleasure. Secondly, you would have been surprised at the comfortable, if not artistic, interior of our exteriorly unattractive hut. In the centre of the "ward-room" or sitting-room was an open fireplace of ingenious design. On a stone and earth base, covered with sheet iron, rested a large cast-iron box with many peculiarly shaped

apertures resembling as far as possible the incomprehensible design of a lady's lace mouchoir. The fire-box was supported by four cast-iron "whirly-gigs," the artistic effort of a mechanic detailed to construct legs for the support of the aforesaid fire-box. Above this box a large hollow pyramid, the apex of which connected with a pipe, which in turn after divers wanderings led through a hole in the roof, offered an exit for the smoke. Needless to say, this offer was frequently ignored. Around this fireplace was a foot-railing constructed from the main spar of a crashed Handley-Page. The rest of the furniture fortunately was not home-made. Large easy-chairs and lounges, the gift of a friendly merchant of Nancy, often made progress from one end of the room to the other,—a feat requiring considerable skill in navigation. A piano was wedged into one corner of the room; "Sin-fin," a mad Irishman, appeared

ENTRANCE TO OFFICERS' MESS

with this piano one day together with an exhilarated French officer driving a lorry. No one ever found out how the piano had been secured, but since a sweet little "demoiselle" now rides "Sin-fin's" Irish hunters, we may believe, if we wish, that a rickety piano formed the basis of an international romance.

The walls of the room were draped with rich damask; as the officers' steward who produced this incongruous luxury was an ex-convict, no inquiries were made concerning it.

In the same hut with the ward-room and adjoining it was the mess or dining-room and beyond this was the "galley" or kitchen. While the Bedouins were inflicted with a cook who had been in pre-war days an expert electrician, the kitchen would not have been your most attractive route to the officers' sleeping-quarters.

Presuming that you left the mess through its more congenial exit, the

ward-room, the next hut you would have come to was the officers' quarters. There at eleven o'clock in the morning you would have heard a full symphony rendered by twenty lusty sleepers. "Is this war?" you might have asked yourself if you did not have in mind that you were visiting a night-bombing squadron. The officers in this hut had returned but five or six hours previously from an all-night raid over Germany.

Beyond this hut are the men's quarters which are deserted at this hour. Across the road is the workshop or repair factory which, under the eye of "Bill," the engine officer, runs "full blast" from six in the morning to nine or ten at night. Next to this miniature factory is the armorers' hut where all the machine guns are overhauled daily, ammunition tested as regards rims, sunken caps, etc., and every possible precaution taken to render the guns thoroughly efficient.

Near by are the huge, camouflaged hangars, or buildings containing the aeroplanes. Here the mechanics are "tuning up" the engines; the riggers are trueing up the aeroplanes, tightening a flying wire here, loosening a landing wire there, testing controls; in fact, doing all that scientific knowledge and care can do to reduce the chance of accident from mechanical imperfection. And upon these patriotic, scientific mechanics, working for their country and their ideals and recompensed from a pecuniary point of view with a shilling or two a day, rested to a large extent, the lives of the aviators and the success of their various adventures.

Back of the hangars and near the officers' quarters is the squadron office. Here are several clerks constantly engaged in recording all the details relating to the men's pay, their military records, their issues of clothes, blankets, etc.,—

is received of the movement of one of these batteries, the pin which represents that particular battery is moved to the new position. Small yellow squares or oblongs with minute black marks represent the enemy aerodromes and hangars. These conventional signs correspond accurately to the aerial photographs of these aerodromes.

Small blue crosses represent the position of enemy balloon barrages and their height. The position of these barrages must be known accurately, for to run into them is fatal and at night they are very apt to trap the unwary. Roughly, they are a series of balloons supporting a huge wire net or cable streamers. The balloons, anchored to the ground and carrying the nets with them, are sent up to a considerable altitude about large cities and important industrial centres. They are to the night aviators what the spider's web is to the fly.

Another conventional sign of this map which is always puzzling to the uninitiated is a series of small pins with streamers attached. These streamers are marked with green dots. One streamer will have one green dot, another two green dots, another three, etc., while others will have different spaces between the dots. These pins mark the position of what is called the "Hun green-ball batteries," and these green balls, fired up to a height of about six thousand feet, direct the Hun aviators to their respective aerodromes when returning from a night raid.

A better system than this for directing aviators at night has never been devised, for low clouds or mist cannot obliterate the signal and they are visible to the aviator for over fifty miles. In fact, this type of signal was so very excellent that our knowledge of the exact positions of the various batteries was of

great assistance to us in our raids over Germany.

On our side of the lines this map was marked with conventional signs similar to those which marked the position of enemy anti-aircraft batteries, aerodromes, and balloon barrages; but on our side of the lines there were large areas marked in red to indicate what was called "prohibited areas"; i.e., areas over which no aeroplane, Allied or enemy, could fly without being subjected to the fire of our anti-aircraft batteries.

There were also white drawing-pins, each bearing a letter, placed at irregular intervals. These located accurately the position of small lighthouses which are usually about fifteen miles apart and from three to ten miles back of the front-line trenches; the letter marked on each drawing-pin designates the letter flashed in Morse code by that particular lighthouse. This system of signals, used by

the British to direct their night aviators to their aerodromes when returning from a raid, had but two great faults. In the first place, the signal was obliterated by low clouds and mist. In the second place, the flash of the light only carried a few miles even under the best conditions. On the other hand, the letters which the lighthouses flashed could be readily changed and consequently were of very little assistance to Hun aviators.

On the third wall of the map-room are aerial photographs of enemy aerodromes, railway stations, sidings, etc., and large-scale plans of German towns and factories.

On the table in the centre of the room are the various instruments by the aid of which the aviators are enabled to figure out their magnetic courses. Every afternoon the map-room is crowded with aviators. Here all the plans for the raid are made, the courses figured and

marked on individual charts, the photographs or plans of targets studied and the best methods of approaching the target discussed. In the evening the wind soundings made by the meteorological expert are reported and again the map-room is crowded with aviators figuring out "drift" and "ground speed" and making out charts which will facilitate their navigation when in the air.

CHAPTER IV

A NIGHT RAID

EVERY precaution having been taken, the engines run, the controls tested, the compasses swung, the courses made out, the charts prepared, and the drift figured, the Bedouins sat down to dinner free from care or worry. The dinner hour was always set, winter or summer, at least two hours before the night's raid was to start.

A guest of the Bedouin mess on the night of an important raid would have been surprised if told that the jolly, laughing officers, who apparently had no thought in the world other than the enjoyment of various wines and viands, were soon to set out on a pioneer raid against a far-distant German industrial centre. For the Bedouins made the best

of the present; they all knew what a long-distance raid over Germany usually meant; many of their jolly comrades would not be seen again. So they made merry at dinner and drank each other's health. The wine, however, was light, and even the most reckless Bedouin drank it in tiny sips, for the work to be done was important. The personal dangers of the raid the reckless Bedouins might ignore, but they knew that these raids fitted into the general tactical plan of operations; consequently, every Bedouin was imbued with a spirit of determination in spite of an apparent frivolity.

On entering the ward-room a few moments before dinner, the guest of the Bedouin mess would have been greeted joyfully by the officers who were singing lustily in perfect tune with a piano which was very much out of tune. A few moments later he would see these rollicking fellows stand silently at attention on the

entry of the Commanding Officer until "Good-evening, gentlemen," from the C.O. granted them permission to "carry on."

Before the chief steward announced dinner, "apéritifs" were passed around; then the C.O. led the way from the ward-room into the adjoining mess, where the officers stood at attention on each side of the long table until the C.O. said, "Gentlemen, be seated." If any one came in late to dinner, he apologized to the C.O. before taking his place at the table; and no matter how oily and dirty he may have been a few moments earlier, he entered the mess clean, freshly shaven, and in neat uniform. This mess etiquette, as it was called, did not interfere in any way with the good-fellowship existing between the C.O. and his junior officers; but it prevented men who had been away from home and the society of ladies for many years from growing

lax in manners and careless of personal appearance.

After dinner, decanters of port were passed around and the King's health was drunk: "Gentlemen, The King."

This toast means nothing to us Americans unless we have drunk it among British officers at the front. Under such conditions, "Gentlemen, The King," is a call to patriotism, a spur to endeavor, and an ideal of courage which must be lived up to. We Americans are so apt to think of a king as a despot or tyrant that it takes us a long time to understand the love which the Englishman has for his King. The King of England is as much of a symbol to Englishmen as the Stars and Stripes are a symbol to us. The King, as an individual, has no power, except the power of influence. This power is great when the influence exerted is in the right direction, but the King has no dictatorial power similar to that which may be

granted to our Presidents. The King is merely a symbol which stands in the minds of Englishmen for patriotism, justice, democracy, and humanity. So when the Bedouins raised their glasses to the toast, "Gentlemen, The King," they paid a tribute to all that Great Britain and her Allies were fighting for — democracy, justice, and freedom of the individual from oppression.

After this final toast, every aviator went to his quarters and clambered into his bulky but warm flying clothes. There was no hurry or bustle, but each aviator, thoroughly equipped for the raid with maps, charts, and instruments, arrived at the map-room on a definite moment. Here he received a few final instructions from the Commanding Officer; then, smoking a last cigarette, he made his way through the dusk to his own aeroplane.

While the aviators drank to "Gentlemen, The King," the mechanics were

warming up the twin motors of each aeroplane, the bomb-racks were being filled with fourteen one-hundred-and-twelve-pound bombs, the guns were being mounted, and by the time the aviators arrived on the aerodrome the huge Handley-Page bombing planes were in readiness for a nine hours' flight over Germany.

After climbing up a ladder to their respective positions, the aviators made a final survey of the machine on the reliability of which depended the success of their adventure. The engines were again run up to see that they gave the proper revolutions, the gauges inspected, the controls tested, and the return spring of each gun weighed. When thoroughly satisfied, each aviator took his place and his pilot signalled for the "chocks" to be withdrawn from in front of the wheels.

While the aviators carried on this final inspection of their machines, the aero-

drome officer, stationed on a high platform situated in one corner of the field, awaited the signal to light the "landing T"; i.e., a huge "T" of electric lights headed into the wind, which shows to the aviators the taking-off and landing path. Each machine is given its respective letter for the day, which is flashed in Morse code on the navigation lights by the aviator when ready to leave the ground; he then awaits an answer from the directing stand. Simultaneously with the lighting up of the huge "landing T," the letter flashed from the first machine ready is repeated by the signal officer. The answer received, the machine taxies across the aerodrome to the starting-point, turns, hurtles down the flare-path and leaves the ground at the head of the "T." Under this simple method of direction I have seen twenty aeroplanes leave an aerodrome on a pitch-black night in twelve minutes without a single mishap.

On leaving the ground the aeroplanes fly dead into the wind for a couple of miles, circle back to the left around the aerodrome, and head into the wind again until the height at which the flight is to be carried out is reached. The first aeroplane to reach this height passes directly over the aerodrome and then steers a course to the first lighthouse. A comparison of this course with the previously figured course, and a comparison of the previously calculated ground speed with the time taken to travel from the aerodrome to the lighthouse enables the aviators, by the use of instruments and a few simple calculations, to gauge their drift. This process is continued on another course to the next lighthouse and the previously tested direction and velocity of wind are accurately checked in this way and future courses altered accordingly. These calculations are all important to the long-distance night bomber,

for although roads show up in the moonlight like white threads, they are too numerous and interwoven to be followed for great distances, and although rivers and lakes look like silver ribbons and blotches, the moon may be obscured at any moment or the ground itself may be obliterated by low clouds or mist. Accuracy in aerial navigation, therefore, is of the utmost importance in long-distance night flying.

The night aviator, however, has many things to think of besides a constant checking and readjustment of his course according to variations in direction and velocity of wind. On his own side of the lines he is constantly challenged by searchlights which must be answered immediately if the aviator wishes to avoid the risk of being shot down by his own anti-aircraft guns or of being attacked by his own night-patrol machines. The method of answering these chal-

lenges is extremely simple. All that is required of the aviator is to shoot at the searchlight with a large pistol loaded with an enormous cartridge. The aviator, intent on his calculations and annoyed by any interruption, often wishes that this pistol was a deadly weapon, but it is not. It merely fires a certain colored light which floats slowly down changing in its descent to certain other colors, which prove to the officer in charge of the challenging searchlight that an Allied aeroplane is above him. The colors which are shown on one night, however, will not do on another, for these "colors of the day," as they are inappropriately called, are changed every night and the utmost secrecy is maintained in regard to them. Even the aviators do not know the "color of the day" until ten minutes before the start of a raid, neither do the officers in charge of the anti-aircraft batteries. The reason for this secrecy

became apparent to the Bedouins one night when a Hun flew over our aerodrome shooting down our "color of the day," blinking his navigation lights, and finally firing down a red light which was our prearranged forced-landing signal. The aerodrome officer, believing that one of the Bedouin machines was returning from that night's raid with engine trouble, lit up the "landing T" and brought upon himself a shower of bombs which carried him into the Unknown.

After crossing the lines the aviators are intent on steering an accurate compass course, checking their position from time to time by various landmarks such as canals, rivers, cross-roads, and woods, and figuring changes in wind. The bursting shells of the enemy anti-aircraft batteries must be disregarded, for a slight détour around a particularly heavy barrage might mean an error of several degrees in their course which, unless cor-

rected, would bring them twenty to thirty miles away from their objective after a flight of one hundred and seventy miles or more, and an accurate correction of a compass course after a wide détour is always difficult and sometimes impossible. Therefore, it is of the utmost importance for long-distance night bombers to hold their course regardless of the enemy's efforts at destruction.

The hatred in the hearts of the Huns, expressed by the constant "whonk" of bursting anti-aircraft shells, contrasts disagreeably with the loveliness of the moonlit panorama. All man's disfigurements of the earth are obliterated by distance and nothing but a scene of inspiring beauty is in view from the aviators' lofty outlook at a height of several thousand feet.

The flashings of the guns, the "flaming onions,"—i.e., strings of phosphorus balls shot up to light the sky and to ignite

any inflammable substance with which they come in contact,—and the black puffs of smoke from the bursting shells add a weird and startling brilliancy to the surroundings. No matter how many times a man may fly at night the immensity of the heavens above him, crowded with unknown worlds, cannot fail to impress him with his own insignificance in the general scheme of the universe, and Death itself appears of small importance compared to the way in which he faces it.

The aviators, however, have little time for reflection, for on a long flight they must keep a constant outlook for such landmarks as will enable them from time to time to mark their exact position on the chart and by comparison with their compass course and "ground speed" vary their course according to changes in direction and velocity of wind. An instrument called the "pitot tube" indicates the speed at which the

aeroplane passes through the air, but the speed at which the plane travels in relation to the ground depends on the direction and velocity of the wind. They must also watch the flashes from anti-aircraft batteries and pin-point them on their maps if possible; aerodromes which are lit up, train movements, the lighting of towns, the blaze of steel factories; in fact everything of military importance must be recorded and reported upon, if accurately located. The night aviator, however, must be extremely careful in his observations, for it is very easy to get lost and it is extremely difficult to keep an accurate check, on the charts, of your exact position over the ground, even after long practice; especially is this true when the flight covers three to four hundred miles in distance and lasts from eight to nine hours.

After several hours of intense concentration the aviators approach their tar-

get, and although they have charted the course constantly they now spend some time in flying back and forth while they check off on a large-scale map the landmarks about the target and satisfy themselves that their long flight will not be valueless if the bombs are dropped with accuracy. In the meantime the sound of the motors, together with the telegraphed intelligence from other Hun towns, tells the enemy that Allied night bombers are in the vicinity. The Huns in charge of the anti-aircraft defences stationed about the target direct huge beams of numerous searchlights toward the sky and an intense barrage is put up above and around the target by the Hun batteries. The air is filled with shrapnel from bursting shells at the altitude at which the machine is flying, for the Huns have accurate instruments which gauge the altitude of an aeroplane from the sound vibrations of its engines. The avi-

ators, however, are still intent on picking out their target (probably a factory which manufactures war material) and have not yet entered the barrage. The Huns, I imagine, often wondered why British bombers flew about a town for such a long time before bombing; the inhabitants always had more than enough time to enter the dug-outs before the bombs dropped. The British bombers, however, were not making war on women and children; they were intent on destroying a poisonous gas factory or other targets of military importance; so they flew about the town until the target was accurately located; then and not till then, they throttled down their engines and glided swiftly down between the searchlight beams and below the barrage of bursting shells, for once the engines are throttled down the enemy's sound instruments are valueless and the anti-aircraft barrage ranged at the previous

altitude of the aeroplane fills the air with shrapnel far above the rapidly descending plane. A quick adjustment of bomb-sights to compensate for the altitude, speed, and drift of the plane and the front fore-sight soon is in line with the target, and after a pause the back fore-sight coming in line with the back-sight gives, with the previously adjusted stop-watch, the exact moment for releasing the first bombs. The plane passes over the target and turns on a steep "bank," while the aviators watch for the burst of the bombs. The bomb-sight is readjusted to the reduced altitude, another sight taken, the remainder of the bombs released, and then, nose down, engine "full out," the huge plane rushes through the lowered barrage for more congenial surroundings.

Great care must be taken when bombing a factory, for usually very close to it the Hun has located an unprotected

prison camp filled with Allied prisoners, and we have official information that prisoners have so infuriated the Hun guards by singing "God save the King" or the "Marseillaise" during a bombardment of the near-by factory that they have been bayoneted to punish them for their "insolence." As soon as the aviators are away from the barrage, they steer a straight course for home, and again an intent outlook is kept for landmarks which will enable them to mark their position on the charts and figure their ground speed and drift. If their course is correct, they will see after a few hours a lighthouse several miles away dimly flashing a letter in Morse code. They head straight for this, and when over it they steer a course which will bring them to the lighthouse situated near their aerodrome. As they approach the aerodrome they fire down the "color of the day" and if the aerodrome is not un-

der bombardment by the Huns the flare-path is lighted and the pilot spirals slowly down while the allotted letter of the plane is being flashed in Morse code on its navigation lights; as soon as this signal is answered from the ground, the pilot glides swiftly down to the flare-path. When fifteen to ten feet from the ground the Holt's flares attached to the wing tips of the planes are lit by electrical contact and the landing is made in a momentary but brilliant blaze of light.

It is interesting to sit in the officers' mess of a night-bombing squadron and watch the returning aviators enter. They are cold and stiff and all are very tired, for no man can fly without fatigue from dusk to dawn under conditions which demand intense concentration and entail a considerable amount of nervous strain, but now is shown the difference in temperament; some return with blood-shot eyes and haggard faces which indi-

cate a condition of intense fatigue; others come in gaily as though home from a late dance; still others thoughtfully quiet. All of them, however, show signs of nervous strain and mental tension and they must relax their taut nerves before going to bed, especially if the raid was but another similar to those that had been carried out on several previous nights. So, while relaxing they eat bully beef sandwiches and drink hot chocolate or beer or, if the night has been particularly cold, a glass of hot rum. Deafened by the roar of the engines and the sudden change in atmospheric pressure they either whisper or yell if they speak at all, during the first few minutes after entering the mess. But the raid is over, so very little is said about it; every now and then some one looks at his watch and sees that nine hours have elapsed since the raid started; he says nothing but he and all realize that the machine which has not

returned has used up its supply of petrol and that the fate of a dear friend will remain unknown perhaps for weeks, perhaps for all time.

CHAPTER V

SOME EPICS OF NIGHT BOMBING

I

IN the summer of 1917 the Germans were rushing troops up to the Ypres front, where the activities of the British threatened them at this point in their line. This movement of troops was made at night, as usual, *because* if made in daylight they would have been plainly visible to our reconnaissance and artillery observation squadrons. These troops were detrained at Menin and were transported by motor lorry along the Menin-Gelevelt road. On a certain evening the first night-bombing squadron of the Royal Flying Corps, then situated west of Nieppe Forest, was ordered to delay in every possible way this movement of enemy troops. The result must have been

satisfactory, for the General in command of the British Army on that front sent us, a few days later, the glad tidings that no German reinforcements arrived at the critical moment and all the British objectives had been captured and held. Whether or not the only night-bombing squadron engaged in that action was responsible for the tie-up of the Hun transportation system is problematical, but all the members of the squadron remember that night and hope that their efforts were of value.

The only thing out of the ordinary that evening in the squadron's routine was the mounting of double guns in the aeroplanes and an earlier dinner hour; the dinner, possibly, was gayer than usual. The machines left the ground in daylight, gained their height over Nieppe Forest and crossed the lines at dusk, swooped down over Menin Station and dropped their bombs at an altitude of

one thousand to five hundred feet. Then, nose down, engine "full out," they raced away from Menin and followed, in the brilliant moonlight, the road to Gelevelt, flying within one hundred feet of the ground.

A heavy fire at close range at the transports on the road and at the shadows of the trees cast by the moon, as the case might be, soon exhausted the drums of ammunition. Each aviator did his level best to get results, all the time trying to avoid landing on the tree-tops; some of them did so land; they were shot down by the Huns. As soon as their ammunition was gone they headed for home and, crossing the lines at a low altitude, were shot at by anti-aircraft batteries and machine guns from the ground and "bumped" here and there by the air displacement of passing shells from the steadily flashing guns of both their own and the enemy's artillery.

When they arrived at their aerodrome there was a breathing-spell for the aviators while the bomb-racks were being refilled with bombs, the empty ammunition drums replaced with full ones, and the engines replenished with petrol, oil, and water. The planes then roared into the air again, climbed for a short time, and then headed for Menin, where railway communications were again bombed and the Menin-Gelevelt road was again raked with machine-gun fire.

After a brief respite on the return from this second raid, the machines again took off and raided the Huns for the third time that night. All that were left of this weary group of aviators returned from this third raid in broad daylight, with nerves strained to the verge of a breakdown; some were in tears, some striving to be gay, and some were very quiet, but all were happy in knowing that they had "done their damndest."

When afterward they learned that the "push" had been successful and that the Hun reserves had failed to appear, their grief for the "missing" was softened by the thought that *their* sacrifice had not been in vain; it had brought about the full accomplishment of the purpose of the raids — C'est la Guerre —

II

Probably the first time that a Rhine town was bombed on a densely cloudy night was in the spring of 1918 and it was bombed by a small Scotchman called "Jock."

The wind that night was from the northeast, a favorable wind from the aviators' point of view because it was against them on the outward voyage. Shortly after crossing the lines, however, dense clouds coming up with the wind obliterated the earth, and all the aviators except Jock turned back hoping to find

their aerodrome before it was also blotted out by the low-lying clouds.

Jock, however, was "keen" on bombing Hun factories, and the objective that night was the Badische Works situated on the river Rhine; so Jock held to his compass course and flew for over four hours without once seeing the ground. When a sufficient time had elapsed to bring him over his target, if his previous reckoning, of course, of ground speed and drift was correct, and if the wind had not varied in velocity or strength, Jock "spiralled" down through the clouds and, finding the ground beneath him nothing but dense blackness, glided lower and lower until eventually a large town directly beneath him became visible and then the river Rhine, passing between Ludwigshafen on the west and Mannheim on the east, was lit up by the rays of the moon coming through a sudden rift in the clouds. Jock by now was

only eight hundred feet above Mannheim; he opened up his throttle and circled around the city while his navigation officer on his large-scale chart compared the landmarks momentarily made visible by the rift in the clouds. At last, thoroughly satisfied as to their position, fourteen one-hundred-and-twelve-pound bombs were dropped as near the factory as possible. If some of these bombs dropped in the town itself, it was not due to intention on the part of the aviators, who, blinded by searchlights, could not be sure of sending all the bombs with accuracy. With over one hundred and sixty miles to travel in a plane riddled with shrapnel from the bursting shells, the prominent thought in the minds of the aviators was, that their work being accomplished, their next move was to "beat it" in the direction where lay friendly country.

After the release of the bombs, Jock

climbed up through the clouds and steered a direct course for home. Since the ground could not be studied because of the intervening clouds, the aviators devoted their entire attention to compass, time, and the stars. During this flight above the clouds the efficiency of the Hun's sound instruments was thoroughly demonstrated, for, although the clouds were too dense for any searchlight to penetrate and this effectually screened the machine from observation from below, again and again Jock's plane was surrounded by the black puffs of bursting anti-aircraft shells.

After flying for a sufficient number of hours to bring them above their aerodrome, if their calculations were correct, Jock and his companion discussed the advisability of coming down through the clouds; the unanimous decision, however, was to continue on until a lack of petrol would force them to land, for

changes in wind might have created a considerable error in their calculations, unchecked as they were by observations of landmarks; so after flying for another hour they came down through the clouds and succeeded in making a safe landing near a small French village just before their supply of petrol was exhausted.

III

One evening in August, 1918, there was a strong southwest wind blowing across the eastern part of France and severe thunderstorms were reported to be approaching. Nevertheless, certain Bedouins were selected to raid the railway station and sidings at Frankfort; "intelligence" having reported important rail movements in that vicinity. The Bedouins were ordered to return if they found, after testing the air, the weather conditions unfavorable for a flight of

such long distance. As an alternative target to Frankfort they were given the Burbach Hutte Works at Saarbrucken.

After gaining their height above the aerodrome, Jock and his navigation officer steered a direct course for "D" lighthouse, situated north of Barcarat and but a few miles from the front-line trenches. Having accurately figured their drift and ground speed on this course, Jock and his companion calculated that, by steering a straight course to Frankfort, spending five minutes over the target, and steering a straight course back to their aerodrome, they could make sufficient headway against the wind on the return voyage to bring them safely home with a ten minutes' supply of petrol left in their tanks; any error in course necessitating a deviation, or any increase in the velocity of the wind, might mean a prolonged sojourn in a German prison camp if not subjec-

tion to the well-known tortures of a German hospital.

After an accurate calculation of direction and velocity of wind, a course of thirty-nine degrees was steered from "D" lighthouse; the river Saar was crossed north of Saarburg; Bitsch and Pirmasens were passed to the north and Kaiserlautern to the south and then, the Vosges Mountains having been crossed, Jock and his companion looked down on the Rhine valley. The Rhine River was crossed north of Oppenheim, and from an elevation of six thousand feet, Mainz, at the juncture of the rivers Main and Rhine, showed clearly in the moonlight. Still holding their course, the aviators looked out to the left, followed up the river Main to Frankfort, here they throttled back the engines, glided swiftly down through the anti-aircraft barrage and searchlights and released their bombs as accurately as possible. Then,

after an almost vertical "bank" so sudden was the turn, Jock steered a straight course for the nearest point in the lines, which was considerably over one hundred miles away. Now the aviators had to face a strong head wind and steer straight into a rapidly approaching storm. The time taken to fly from Frankfort to the Rhine River, together with a change in drift, proved to the aviators that the wind had varied slightly in direction and had increased somewhat in velocity. They immediately decided not to lose time by climbing above the approaching storm, but to pass beneath it. This they did, and those aviators never went through a nastier experience than this homeward journey. Blinded and stung as they were by the downpour of rain, while their aeroplane was hurled about by the wind to such an extent that it appeared to be completely out of control, the voyage seemed interminable.

The clouds above belched flashes of lightning in apparent unison with the Hun anti-aircraft batteries below. Held in the beams of the enemy's searchlights and plainly visible against the dark clouds above, Jock's plane was an easy target for the Hun gunners.

But who can account for the fortunes of war? Jock brought his plane, riddled with shrapnel, into the moonlight beyond, showing up Kaiserlautern directly below, with its searchlights sweeping the sky while its anti-aircraft batteries filled the air with bursting shells; but in spite of this "hate" it was a pleasant sight to the aviators, for it showed them that their course was correct and that there was still time to gain the lines unless the wind increased. Again they passed below another dense bank of clouds, to experience again being blinded with the rain and shaken by the violence of the wind by which their plane was tossed about,

all the while subjected to an attack by lightning from above and by anti-aircraft guns from below. It is a little trying to the nerves to fly for an hour without being able to see the earth beneath, and surrounded by the incessant flashings of lightning and the "whonkings" of bursting shells, but when homeward bound these little incidents are of minor import.

For the second time Jock brought the plane, tossing about like a cork on a mountainous sea, out into comparative light. As landmarks were recognized, the course was checked and changed, when a third storm was encountered. This last storm was furious, and it was impossible to hold the plane on a compass course; fortunately, however, the storm lasted but a short time, and when Jock brought his plane out into the breaking dawn, the Marne-Rhine Canal was visible to the south. A few moments later the lines

AFTER THE LANDING

were crossed and a direct course was steered to the nearest aerodrome. Just then the engines spluttered, then stopped, the petrol was exhausted, and Jock was forced to land in a field near Lunéville after a sustained flight of eight hours and fifty minutes.

CHAPTER VI

THE GUIDING HAND

MYSTERIOUS DICK, or "Mystery" as he was usually called, was a slender, anæmic-looking boy with deep brown eyes. He was nicknamed "Mystery" for several reasons. In the first place, he gave every one on first acquaintance an uncomfortable feeling; no one could explain this, but every one admitted that he was a "bit queer." When he looked at you his eyes never appeared to be focused on you, but to be looking at something back of you; I have seen a man to whom Dick was talking suddenly turn and look over his shoulder. Another very noticeable trait of Dick's was to answer an unasked question, or to interrupt a man at the beginning of an argument with a refu-

tation or agreement, as the case might be.

I remember coming into the mess one morning about five o'clock after an all-night raid; our machine was the third back. It was a bitter cold winter's night and "upstairs" it was absolutely numbing. In the mess there were Mac and Dick and one or two others, thawing their congealed blood and numbed brains with hot rum. It had been a nasty trip that night, dense, low clouds and a head wind on the return voyage; there were many machines still unaccounted for, although the supply of petrol would "keep them up" but another fifteen minutes. So in the mess we sipped our hot rum and sat and thought, or just sat.

"I think they were south of Dieuze"; it was Dick who broke the silence.

Mac jumped and looked hard at "Mysterious Dick," and as we all looked at him inquiringly a faint flush

rose to his face, he gulped down his rum and left the mess.

"It's queer," said Mac, "how often he does that."

"Does what?" I asked.

"Answer your unasked question," replied Mac. "The green balls must have been south of Dieuze just as 'Mystery' said, for after leaving Mannheim I followed up the Rhine to Hagenau Wald, turned west and crossed the Vosges over Zabern; here we went above low clouds and I did n't see the ground again for over an hour. I steered my course all right, but was fearing a change of wind when just ahead of me I saw the Hun signal of two green balls come up through the clouds; as the last 'intelligence' placed these two balls at Morchange, I changed my course from 270° to 245°. It was only luck that about half an hour later a rift in the clouds showed me 'F' lighthouse, and as that is about thirty

miles south of 'B' lighthouse, my original course over Zabern of 270° must have been about right to strike 'B' lighthouse. So the green-ball signal, as 'Mystery' said, must have been moved from Morchange to south of Dieuze, and that is just what I was puzzling out when Dick answered the puzzle for me. He's queer, all right." And Mac called for another rum.

And "queer" is the best description of Dick that any of the Bedouins could have given you, if you had asked them, until one night he was finally coaxed after many "treats" to tell about his earlier war experiences.

"In 1912 I was a subaltern in the Indian army," Dick said quietly; "a row over a woman resulted in my court martial and disgrace.

"When the war broke out I joined as a dispatch rider; I was wounded and was in the hospital for over five months.

When I came out I succeeded in getting into the Royal Flying Corps and eventually was granted a commission. But as a pilot I was a complete failure; I 'wrote off' several machines and in my last crash I nearly 'wrote off' myself. I was unconscious for over a month and it was over eight months before I left the hospital.

"I finally got back to France as a recording officer to a Handley-Page squadron; here I ran into an old pal of mine, and one night, when his navigation officer was sick, my pal took me on a raid without saying a word to any one. It was the first time I had ever been in a Handley-Page aeroplane and it was the first time I had ever flown at night, but my pal was the best pilot in the squadron and the way to the Gontrode aerodrome was an open book to him, for he had been there many times before; he took me as a passenger for the experience.

"I remember as we 'taxied' over the aerodrome that the roar of the engine on each side of me, the flashing of lights, the other machines as they passed us or waited with slowly 'ticking-over props' for us to pass, the different-colored lights which were being fired down from machines already in the air and the lights fired up from the ground, all combined and whirled through my excited brain like a meaningless nightmare. Then there was a deafening roar and we shot down a path of light, bumped hard, bumped less hard, bumped again, and the huge plane with its great load of bombs was in the air. Lights on the ground and the lights of machines in the air became mixed until I could not tell one from the other.

"As we rose higher and higher, ground lights far off in the distance came hurtling toward us like the navigation lights of a fast approaching machine; I would

clutch Jack, yell, and point out the lights in order to avoid a collision as it seemed to me; Jack would grin, pull me down on the seat beside him, and tell me the lights were on the ground and at least ten miles away. Gradually I got control of myself and tried to find the aerodrome we had just left; it was nowhere to be seen. There was a network of white threads on a black background, an occasional winding silver ribbon with here and there a silver blotch and queer-shaped blacker blacknesses on the general blackness; these were roads, rivers, lakes, and woods as they looked from the air at night.

"How long we had been in the air I don't know. Time seemed nothing, or an eternity. We were suspended in a sphere. Lights or stars rushed at us or receded or whirled about. Time and distance became mere words without meaning and I had fallen into a state

resembling hypnotic sleep when suddenly roused by Jack. 'There are the lines,' he shouted, and as far as the eye could see, to left and right, out of the darkness beneath us were the constant flashes of the never silent guns of the Flanders front. Every now and then we got a sudden 'bump' as a shell passed near us. I had fallen into an almost semi-conscious state when 'tut-tut-tut-tut-tut' jumped me off my seat; I realized that I was surrounded by a dazzling whiteness; the machine itself was brilliant. Amidst the 'tut-tut-tut' of our own machine guns shooting down at the searchlights there was a constant dull 'whonk,' 'whonk,' 'whonk,' and the whole machine seemed to be enveloped in puffs of black smoke as the anti-aircraft batteries found the range.

"Suddenly the nose of the machine went down and my breath left me in the crazy rush, my hands grasped at

anything, and somehow, momentarily blinded with fright as I was, my right hand involuntarily clutching Jack conveyed the truth to my brain. Jack was dead. He had fallen forward on the wheel and the giant plane was rushing, roaring down to destruction. With a spasmodic effort I pulled his body from the seat onto the floor at my feet and pulled back the wheel. With a sickening change and a shrill singing of wires we were climbing. How the fuselage and tail plane stood the strain of it, God knows. I was in Jack's seat now pushing the wheel from me, pulling it toward me, turning it to the right, then to the left, pushing the rudder bar with my right foot, then with my left. Panic was in control. We must have dropped three thousand feet before a sudden calmness came over me and I found this aerial monster as gentle to manage as a perfectly bitted horse.

"But there was Jack, huddled on the

floor at my feet with part of his head gone. I remember leaning down and trying to pull him out of his cramped position, and then came an eternity of star-gazing. I wondered why the stars did n't run into each other and crash. I leaned across the fuselage and turned a pet-cock; a little spray of petrol came out with the escaping air; the hands of two dials on the left side of the cock-pit began turning slowly anti-clockwise; I forgot them and looked at the stars. Later I pressed a button on the dash-board and looked out at my starboard engine; a small dial was lit up. I looked at the port engine, a similar dial was lit up. I took my right hand from the wheel and pulled the throttle slightly back; again I star-gazed as if in a dream and without any volition I closed the pet-cock which I had previously opened.

"This was my first time in a Handley-Page, and I knew nothing of pressures or

temperatures. How long I flew I don't know; what direction I should have flown I did not know at that time. Occasionally I glanced at the compass and as well as I can remember the needle pointed west generally, but I gave it no thought. Finally I pulled back the throttle and began to glide. I leaned over the next seat and pulled two levers. Remember that at this time I had never heard of shutters for the radiators. Down I came into heavier and heavier atmosphere. I was calm and happy. I never even gave the ground a thought, never even glanced at it. I remember taking from a rack on my left a stubby revolver with a huge bore, pointing it over the side and pulling the trigger, and I watched a green light go slowly down and searchlights that were blinking up at me went out. A few seconds later a knob on the dashboard seemed to rivet my attention; it was a small knob exactly like an

electric-light switch. I began to play with this. To do this I had to lean forward and stretch out my left arm; this action brought my face around to the right, and as I played with the knob I saw a light blinking on my right wing tip. I remember laughing at this.

"The plane took a sudden dip and I sat up. Just off to my right and very little below me were lights on the ground in the shape of a 'T,' and other lights were flashing at me. I turned toward the 'T' and stuck down the nose of the machine; I pulled the throttle farther back, and just as I seemed to be running into dense blackness I leaned forward and pressed a button; a brilliant light sprang up under the machine; there was the ground not two feet away, apparently. I yanked back the wheel and a moment later there was a great bump, another and another, and we came to rest on our own aerodrome.

"The doctor told me that he had never seen such a collapse. I had been unconscious for hours after being lifted from the machine together with my dead pal. I was awarded this decoration, gentlemen, for bringing that machine home safely. Since that time I have been awarded these other decorations for feats you have all heard of. But I want to tell you," and "Mystery Dick" stood up with flushed face and blazing eyes, "that I have never flown an aeroplane in France. Jack, my old pal, dare-devil Jack, whose head was blown off beside me during my first trip across the lines, flies my machine. Jack, dear old Jack, has won these medals I wear."

And Dick, no longer "Mystery Dick," left the mess. I say no longer "Mystery Dick" because from that day on there was nothing mysterious about Dick to the "Bedouins."

Explain it as you may, call it God, the

spirit of a dead friend, or a thought vibration to which their mind is attuned, explain it as you choose, or try to explain it not at all, every member of the "Bedouin" Squadron has felt the "Guiding Hand" and every "Bedouin" knew, as every man who makes constant companions of danger and death must eventually know, that the dead still "carry on."

THE END

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